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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/539,961   | 06/17/2005  | Francesca Pignagnoli | 62437               | 6667             |
| 109  | 7590        | 09/11/2006           | EXAMINER            |                  |
| THE DOW CHEMICAL COMPANY<br>INTELLECTUAL PROPERTY SECTION,<br>P. O. BOX 1967<br>MIDLAND, MI 48641-1967 |             |                      |                     | COONEY, JOHN M   |
|  |             | ART UNIT             |                     | PAPER NUMBER     |
|  |             | 1711                 |                     |                  |

DATE MAILED: 09/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/539,961             | PIGNAGNOLI ET AL.   |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | John m. Cooney         | 1711                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 22 June 2006.
- 2a) This action is FINAL.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-5 and 8-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-5 and 8-22 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

|  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|  | 6) <input type="checkbox"/> Other: _____                          |

Applicant's arguments filed 6-22-06 have been fully considered but they are not persuasive.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5, and 8-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hickey et al.(6,359,022) in view of Chow et al.(3,842,036).

Hickey et al. discloses preparations of rigid closed cell foams prepared from two component foam forming compositions wherein (a.) the polyols component includes aromatic polyester polyol, polyether polyol as desired, alkanes and water as blowing agents, as well as, other blowing agents, including, as a preferable species, formic acid, and hydrofluorocarbons, as desired, and other ingredients; (b.) the isocyanate component comprises, at least, specifically, Mondur 489 which is an aromatic isocyanate having a functionality of 3.0, and (c.) the two components are combined at various NCO indexes meeting those of applicants claims (see the abstract, column 1 lines 12-30, column 2 lines 41-51, column 4 lines 66-67, column 11 lines 65-67, column

12 lines 55-57, column 13-15, column 21 lines 2-22, Example 10, Table 5, and claims 15 and 16, as well as, the entire document).

Hickey et al. differs from applicants' claims in that formic acid and hydrofluorocarbons are not particularly required. However, formic acid is exemplified as a most preferred monocarboxylic auxiliary blowing agent (column 14 lines 44-45) and the hydrofluorocarbons of applicants' claims are all recited as acceptable auxiliary blowing agents in Hickey et al.'s disclosure (see column 15 lines 37-53). Accordingly, it would have been obvious for one having ordinary skill in the art to have employed the formic acid and hydrofluorocarbon auxiliary blowing agents of Hickey et al. in the preparations of Hickey et al. for the purpose of imparting their foam enhancing and producing effects in order to arrive at the products and processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results. Additionally, Hickey et al. discloses control of the amount of their blowing agents (see column 15 line 62- column 16 line 37) and control of amounts of the blowing agent for purposes of controlling the implementation of their result effective effect is within the purview of the ordinary practitioner in the art. Normally, changes in result effective variables are not patentable where the difference involved is one of degree, not of kind; experimentation to find *workable* conditions generally involves no more than the application of routine skill in the art of chemical engineering. *In re Aller* 105 USPQ 233. Similarly, the determination of *optimal* values within a disclosed range is generally considered obvious. *In re Boesch* 205 USPQ 215. Further, a *prima facie* case of obviousness has been held to exist where the proportions of a reference are

close enough to those of the claims to lead to an expectation of similar properties.

*Titanium Metals v Banner* 227 USPQ 773. (see also MPEP 2144.05 I)

Hickey et al. differs from applicants' claims in that phenol formaldehyde novolak initiated polyalkylene oxide polyols are not exemplified as species in the description of the preferentially employed polyoxyalkylene polyether additional polyols of Hickey et al.'s invention (column 11 lines 65-67). However, Chow et al. discloses phenol formaldehyde novolak initiated polyalkylene oxide polyols to be useful polyether polyols in the formation of rigid polyurethane and polyisocyanurate foams for purposes of assisting in rigidity contribution and enhancing strength and stability properties in products formed (see column 1 line 46- column 3 line 22, as well as, the entire document). Accordingly, it would have been obvious for one having ordinary skill in the art to have employed the phenol formaldehyde novolak initiated polyalkylene oxide polyols of Chow et al. as the additionally employed polyoxyalkylene polyols in the preparations of Hickey et al. for the purpose of imparting their rigidity, strength, and stability contributing effect to the products realized in order to arrive at the products and processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results. Chow et al. is looked to for the disclosure of the polyol of applicants' claims, and its disclosure is inclusive of employment of these polyols in the amounts as claimed by applicants. Further, the following applies here as well. Normally, changes in result effective variables are not patentable where the difference involved is one of degree, not of kind; experimentation to find *workable* conditions generally involves nor more than the application of routine skill in the art of

chemical engineering. *In re Aller* 105 USPQ 233. Similarly, the determination of *optimal* values within a disclosed range is generally considered obvious. *In re Boesch* 205 USPQ 215. Further, a *prima facie* case of obviousness has been held to exist where the proportions of a reference are close enough to those of the claims to lead to an expectation of similar properties. *Titanium Metals v Banner* 227 USPQ 773. (see also **MPEP 2144.05 I**)

Applicants' provide no structure to their laminate other than requiring that the foam material be present. Accordingly, no patentable weight is afforded the limitations of claim 15.

Applicants' arguments have been considered, but rejection is maintained for the reasons set forth above. Applicants' arguments as to amounts of respective components are addressed in the body of the rejection above.

As for the showing of results the following need to be considered:

**Claims Must be Commensurate With Showings:**

Evidence of superiority must pertain to the full extent of the subject matter being claimed. *In re Ackerman*, 170 USPQ 340; *In re Chupp*, 2 USPQ 2d 1437; *In re Murch* 175 USPQ 89; *Ex Parte A*, 17 USPQ 2d 1719; accordingly, it has been held that to overcome a reasonable case of *prima facie* obviousness a given claim must be commensurate in scope with any showing of unexpected results, and in order to

establish unexpected results for a claimed invention, objective evidence of non-obviousness must be commensurate in scope with the claims which the evidence is offered to support. *In re Greenfield*, 571 F.2d 1185, 1189, 197 USPQ 227, 230 (CCPA 1978), *In re Linder*, 457 F.2d 506, 508 (1972), *In re Tiffin*, 448 F.2d 791, 792 (1971). Further, a limited showing of criticality is insufficient to support a broadly claimed range. *In re Lemin*, 161 USPQ 288. See also *In re Kulling*, 14 USPQ 2d 1056.

Results Must be Unexpected:

Unexpected properties must be more significant than expected properties to rebut a *prima facie* case of obviousness. *In re Nolan* 193 USPQ 641 CCPA 1977.

Obviousness does not require absolute predictability. *In re Miegel* 159 USPQ 716.

Since unexpected results are by definition unpredictable, evidence presented in comparative showings must be clear and convincing. *In re Lohr* 137 USPQ 548.

In determining patentability, the weight of the actual evidence of unobviousness presented must be balanced against the weight of obviousness of record. *In re Chupp*, 2 USPQ 2d 1437; *In re Murch* 175 USPQ 89; *In re Beattie*, 24 USPQ 2d 1040.

Applicants' have not persuasively demonstrated unexpected results for the combinations of their claims. Applicants have not demonstrated their results to be clearly and convincingly unexpected and applicants have not demonstrated their showings to be commensurate in scope with the scope of combinations now claimed.

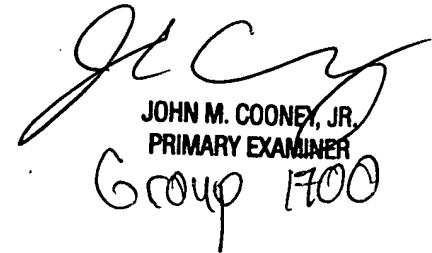
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Cooney whose telephone number is 571-272-1070. The examiner can normally be reached on M-F from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
JOHN M. COONEY, JR.  
PRIMARY EXAMINER  
Group 1700